

Colorado, Mitchell County, 13777; Strawn, Palopinto County, 14239; Big Spring, Howard County; Sweetwater, Nolan County.

At San Angelo, Bronte, Colorado and Gamble's Ranch this species was found on sandstone bluffs, although at the last named station it was more abundant on Cretaceous limestone rocks. All other occurrences noted were on dry limestone bluffs, which is its usual habitat.

WEBB CITY, MO.

(To be continued)

The Botrychiums of Mobile County, Alabama

E. W. GRAVES

Mobile county lies principally in the coast plain. However, there is a line of sand hills extending down through the northwest corner of the county, running about half way across and coming within seven miles of the city of Mobile. The east side is very low and marshy. Along the Alabama river and Mobile bay, which bound the east side of the county, is a continuation of swamps which also cover a large part of the south end of the county.

The flora of this low country is very rich, for here we find *Sarracenia flava*, *S. rubra*, *S. psittacina*, *S. drummondii*, the yellow, red, and purple pitcher-plants. Also we find *Pogonia ophioglossoides*, *P. divaricata*, *Limodorum tuberosum*, *L. parviflorum*, *L. pallidum*, and *L. multiflorum*, and a large representation of *Habenaria* and others of the orchid family. Here too are found eight species of the *Rhexia* or Meadow Beauty family.

Among the ferns there are found the Woodwardias, *Osmundas*, *Dryopteris patens*, and other of the marsh loving kinds.

It is on the higher ground of the north and west part of the county that we find the subjects of this sketch.

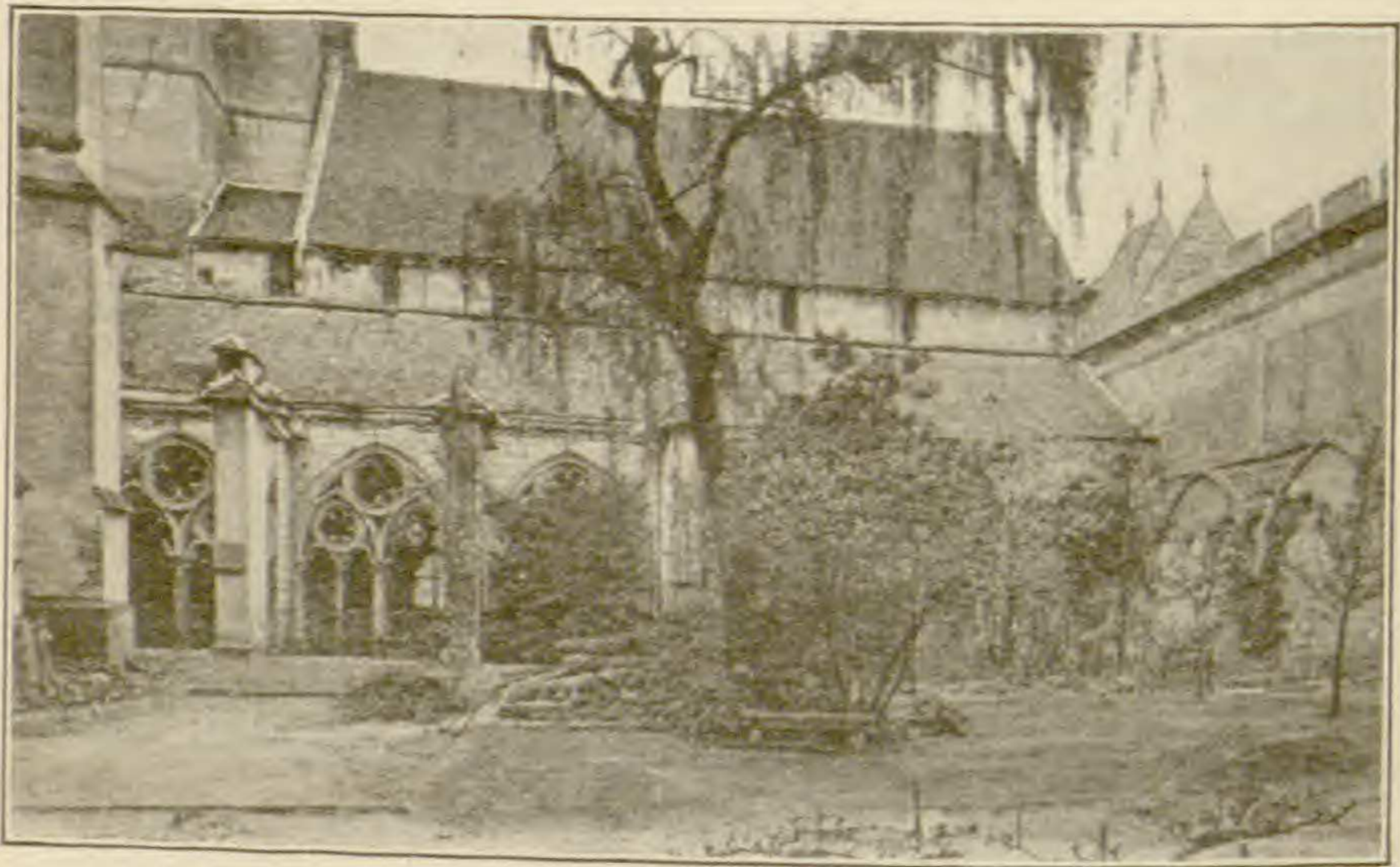
Botrychium biternatum (Lam.) Underw., which is found from North Carolina to Florida and westward into Alabama (as given by Mohr in his Plant Life of Alabama), is found only in Mobile county. *Botrychium Alabamense* Maxon, which was separated from *B. biternatum* a few years ago and given specific rank by Maxon, is found growing with *B. biternatum* and *B. obliquum* on the high land ten miles west of Mobile near the village of Spring Hill. *B. Alabamense* is the more common of the two. It is found commonly around Spring Hill and four or five miles to the west. To the north, near the town of Whistler, I found several plants growing. *B. biternatum* is quite rare in the county, growing only on Spring Hill in two small colonies. There are two distinguishing characteristics which show the wisdom of separating the two species. They are the character of the growth, and the time of fruiting. In growing, *B. Alabamense* lifts the sterile frond from three to ten inches above the ground, while in all the several dozens of specimens of *B. biternatum* I have seen, I have never found one that held the sterile frond more than an inch above the ground. Usually it lies spread out flat on the earth. The time of fruiting differs by several months. *B. Alabamense* is seen coming through the ground about the middle of July, and by the middle of September it begins fruiting, which is usually complete by the 15th of October. By the last of August *B. biternatum* is pushing through the ground, and by December the sterile frond is fully developed. But it is the first of January before the fertile frond begins to show itself through the ground. By the first of March it is in full fruit. By this time the fertile fronds of *B. Alabamense* have withered and the sterile fronds are turning red and beginning to die down.

In size *B. Alabamense* is the larger, reaching a height of fifteen to eighteen inches. *B. biternatum* runs from three to seven inches.

I have studied these ferns for about two years and this is the data that I have made from my study.

I have a few specimens and I am willing to divide with members of the society if stamps are sent to cover postage.

SPRING HILL, ALA.



MONASTERY GARDEN, NOYON (before the war)

A FERN FROM THE BATTLE-GROUND.—I have in my herbarium a fine specimen of *Dryopteris filix mas* Schott. The frond was taken from a plant in the fern garden of Mrs. Wm. F. Brooks, New Britain, Conn. The plant was taken from the Monastery garden of Noyon Cathedral, Noyon, France, by Mrs. Brooks in July, 1913. It seems to me that battle-scarred country would be poor collecting ground for the fern collector to-day.—H. C. BIGELOW, New Britain, Conn.

Recent Fern Literature

Elizabeth Dorothy Wuist Brown has described a case of presumably induced apogamy among prothallia of